

WHAT IS CLAIMED IS:

1. A method of providing a packet call service via an Internet Protocol (IP) based network in a wireless mobile communication system, comprising the steps of:

5 constructing a set of service primitive information including radio channel assignment information in accordance with at least one service class for the packet call service;

10 determining a service primitive combination according to a service class of a packet call based on the constructed service primitive information, if a packet call for at least one mobile terminal is generated;

15 assigning to the at least one mobile terminal a radio channel corresponding to the determined service primitive combination; and

 providing the at least one mobile terminal with the packet call service by using the assigned radio channel.

2. The method of claim 1, wherein the service primitive combination is determined on the basis of service class information of the packet call received from the IP network.

20 3. The method of claim 2, wherein the service class information of the packet call is input by a user of the at least one mobile terminal.

4. The method of claim 1, wherein the service primitive information includes radio channel assignment information for an interactive call.

5. The method of claim 4, wherein the service primitive information, comprises:

5 at least one forward primitive, selected from the following:

a first forward primitive including channel assignment information for a given channel 'F-CCCH' or 'F-BCCH', having features of multicast and unicast and high-speed transmission, but with its access and quality factors not guaranteed, and further not providing for soft handoff or power control therefor;

10 a second forward primitive including channel assignment information for a given channel 'F-FCH', having features of multicast and unicast and high-speed transmission, with its access and quality factors guaranteed, and further not providing for soft handoff or power control therefor; and

15 a third forward primitive including channel assignment information for a given channel 'F-FCH', having features of unicast and a high-speed transmission, but with its access and quality factors guaranteed, and further providing for soft handoff and power control therefor; and

at least one reverse primitive, selected from the following:

20 a first reverse primitive including channel assignment information for a given channel 'R-FCH', having a feature of unicast, but without high-speed transmission being supported, and without access and quality factors guaranteed, and further providing for soft handoff and power control therefor; and

a second reverse primitive including channel assignment information for a

given channel 'R-CCCH', having features of unicast and a high-speed transmission supported, and with the access and quality factors guaranteed, and further providing for soft handoff and power control therefor.

5 6. The method of claim 5, wherein when a group call service is provided to a plurality of mobile terminals by using the channel 'F-FCH' according to the second forward primitive, the a number of mobile terminals simultaneously capable of carrying out a handoff is limited.

10 7. The method of claim 5, wherein when a group call service is provided to a plurality of mobile terminals by using the channel 'F-FCH' according to the second forward primitive, no power control is substantially performed.

15 8. The method of claim 5, wherein when a group call service is provided to a plurality of mobile terminals by using the channel 'F-FCH' according to the second forward primitive, an identical Walsh code corresponding to the channel 'F-FCH' is assigned to the plurality of mobile terminals.

20 9. The method of claim 5, wherein when one of a group call and a private call service is provided to at least one mobile terminal by using the channel 'F-CCCH' or 'F-BCCH' according to the first forward primitive, a plurality of cells preassigned to said at least one mobile terminal are grouped together in an area in which a limited handoff is provided.

10. The method of claim 5, wherein when one of a group call and a private call service is provided to at least one mobile terminal by using the channel 'R-CCCH' according to the second reverse primitive, power control is provided using a Common
5 Power Control Channel (CPCCH).

11. A method of providing a packet call service via an Internet Protocol (IP) based network in a wireless mobile communication system, comprising the steps of:

upon request of a packet call to the IP network, transmitting from the IP network
10 service class information for the packet call to a base station in the wireless mobile communication system ;

analyzing the service class information in the base station, and if the packet call is an interactive group call serving a semi half-duplex communication, determining a service primitive combination corresponding to the group call based on predefined
15 service primitive information ;

assigning to a plurality of group call mobile terminals one of a forward channel 'F-CCCH' and 'F-BCCH', and a reverse channel 'R-CCCH' according to the determined service primitive combination; and

providing said plurality of group call mobile terminals with an interactive group
20 call service by using the assigned radio channels.

12. A method of providing a packet call service via an Internet Protocol (IP) based network in a wireless mobile communication system, comprising the steps of:

upon request of a packet call to the IP network, transmitting from the IP network service class information for the packet call to a base station in the wireless mobile communication system;

analyzing the service class information in the base station, and if the packet call is
 5 an interactive group call serving a full-duplex communication, determining a service primitive combination corresponding to the group call based on predefined service primitive information constructed in advance;

assigning to a plurality of group call mobile terminals a given forward channel 'F-FCH', and one of a reverse channel 'R-CCCH' and 'R-FCH' according to the determined
 10 service primitive combination; and

providing said plurality of group call mobile terminals with an interactive group call service by using the assigned radio channels.

13. The method of claim 12, wherein when providing the interactive group call
 15 service, the a number of mobile terminals simultaneously capable of carrying out a handoff is limited.

14. The method of claim 12, wherein when providing the interactive group call service, no power control is substantially performed.

20 15. The method of claim 12, wherein when assigning the channel 'F-FCH', an identical Walsh code corresponding to the channel 'F-FCH' is assigned to the plurality of group call mobile terminals.

16. The method of claim 12, wherein when providing the interactive group call service, power control is provided using a Common Power Control Channel (CPCCH).

5 17. A method of providing a packet call service via an Internet Protocol (IP) based network in a wireless mobile communication system, comprising the steps of:

 upon request of a packet call to the IP network, transmitting from the IP network service class information for the packet call to a base station in the wireless mobile communication system ;

10 analyzing the service class information in the base station, and if the packet call is an interactive private call serving a full-duplex communication, determining a service primitive combination corresponding to the private call based on predefined service primitive information ;

 assigning to a private call mobile terminal a given forward channel 'F-FCH' and a
15 given reverse channel 'R-FCH' according to the determined service primitive combination; and

 providing said private call mobile terminals with an interactive private call service by using the assigned radio channels.

20 18. A method of providing a packet call service via an Internet Protocol (IP) based network in a wireless mobile communication system, comprising the steps of:

 upon request of a packet call to the IP network, transmitting from the IP network service class information for the packet call to a base station in the wireless mobile

communication system ;

analyzing the service class information in the base station, and if the packet call is an interactive private call serving a semi-half duplex communication, determining a service primitive combination corresponding to the private call based on predefined

5 service primitive information ;

assigning to a private call mobile terminal a given forward channel 'F-CCCH' and a given reverse channel 'R-CCCH' according to the determined service primitive combination; and

providing said private call mobile terminal with an interactive private call service

10 by using the assigned radio channels